The Bulletins are published weekly throughout the school year (thirty issues) to aid teachers and students in keeping abreast of geography behind current news events.

GEOGRAPHIC SCHOOL BULLETINS

of

The National Geographic Society

WASHINGTON 6, D. C.

The National Geographic Society is a non-profit educational and scientific Society established for the increase of geographic knowledge and its popular diffusion.

VOLUME XXIX — November 27, 1950 — NUMBER 9

1. U.S. Arms Scheduled for Thailand (Siam) Aikman
2. Germany's Bremen Recovers from War Wounds Patterson - Gray
3. New Park Enhances Bay of Fundy's Charm Hoopes - Atwater
4. Alexander Graham Bell Enters Hall of Fame Hoopes - Gray
5. Katmai Monument Is Alaskan Volcanic Wonder Aikman

ALEXANDER GRAHAM BELL, NOW IN THE HALL OF FAME (Bulletin No. 4), MAKES THE FIRST LONG-DISTANCE TELEPHONE CALL, IN 1892, BETWEEN NEW YORK AND CHICAGO

Bulletin No. 1, November 27, 1950

U.S. Arms Scheduled for Thailand (Siam)

THE promise of arms to Thailand (Siam), through Uncle Sam's emergency military-assistance program for the Far East, brings into the family of communist-resisting nations a land of temples, tigers, song-writing royalty, court astrologers, and a full rice bowl that is more than tempting in the populous, rice-consuming Orient.

Thailand lies in the heart of the great southeast Asia peninsula. The northern bulk of the country is almost enclosed, from east to west, by Indochina and the independent Union of Burma. Southward, a slim streamer of Thai territory adjoins British-protected Malaya down near the end of the long Asiatic "tail."

Has Large Minorities

Revolts, led or supported by communist groups, have flamed since the end of World War II in all three neighbor states. Recently Thailand is reported to have closed its border with Burma, and to have tightened restrictions against incoming refugees from embattled Indochina.

Thailand covers more than three times the area of New England. It holds some 18,000,000 people, including 3,000,000 or more Chinese, who operate much of the merchandising and rice-processing industry. An estimated 700,000 Moslem Malays, in the far south, make up another large minority.

Available for defense, according to a recent estimate, is an army of 30,000 or more troops, of which Thailand has already shipped 1,200 for United Nations service in Korea. Like other military forces, they wear khaki for ordinary duty, but turn out in vivid Thai costume for state occasions. One palace guard company is resplendent in red coats, black trousers, and black plumes cascading over white sun helmets.

The Thai people were ruled under an absolute monarchy until 1932, when a bloodless revolution ushered in a constitutional monarchy. During the late Pacific struggle, Thailand, dominated by the Japanese, declared war on Great Britain and the United States.

There was, however, little popular support for the action, and, after the cessation of hostilities, the government repudiated its war declarations and returned to its neighbors the several borderland areas which had been acquired while the Japanese were running things.

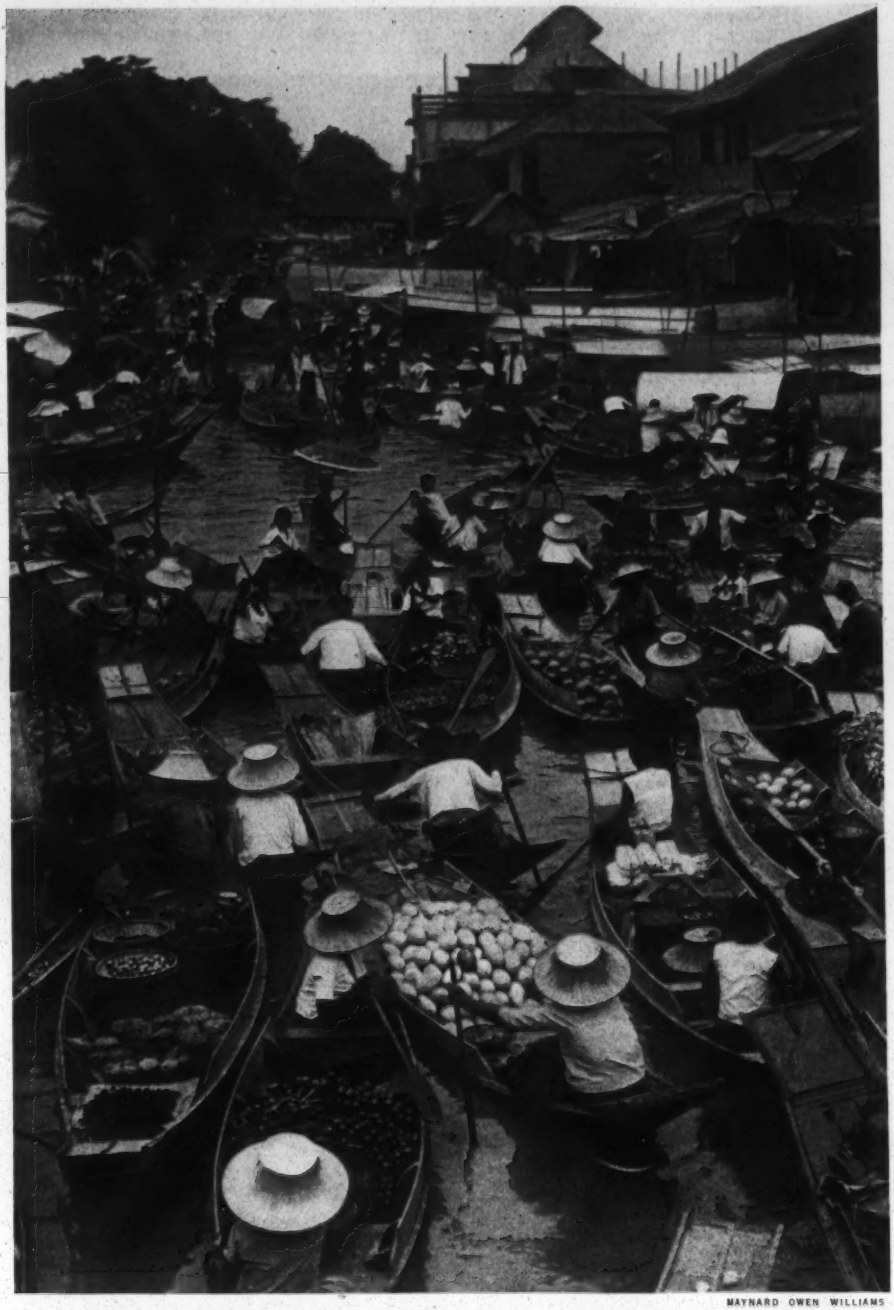
Coronation Last Spring

Thailand's present king is the youthful American-born Bhumibol Adulyadej (Phumiphon Aduldet). His dynastic name is Rama IX. He has had a headline-making career. A recent contributor of popular songs to the American stage, and now in Europe completing his education, he succeeded to the regency-controlled throne following the mysterious shooting of his brother in 1946.

Bhumibol was officially enthroned, in the spring of 1950, with elaborate ceremonies which included the long-delayed cremation of his late

ENTERED AS SECOND CLASS MATTER APRIL 27, 1943, POST OFFICE, WASHINGTON, D. C., UNDER ACT OF MARCH 3, 1879.
COPYRIGHT, 1950, BY THE NATIONAL GEOGRAPHIC SOCIETY. INTERNATIONAL COPYRIGHT SECURED. ALL RIGHTS RESERVED.
SUBSCRIPTION TWENTY-FIVE CENTS FOR THIRTY WEEKLY ISSUES DURING THE SCHOOL YEAR. IN CANADA FIFTY CENTS.

UMI



MAYNARD OWEN WILLIAMS

BY BOAT, FARMERS BRING FRUIT AND VEGETABLES TO BANGKOK'S MAHANAK MARKET

The capital of Thailand (Bulletin No. 1) is laced with canals. To this waterway come only man-sculled sampans; a roomier market place is reserved for powerboats with their larger cargoes.

Germany's Bremen Recovers from War Wounds

THE American occupation zone in Germany, commonly thought of as a huge block of territory far inland, also takes in two small North Sea areas more than 100 miles removed from the rest of the zone. These two enclaves, embedded in the British zone, are Bremen and surroundings, and a section of the mouth of the Weser River which includes the cities of Wesermünde and Bremerhaven (illustration, next page).

Ocean vessels can reach both areas, which was a reason for their being included in the United States zone. They serve as ports for the zone proper.

Has Known Destruction and Revival

Bremen is by far the most important feature of the two enclaves. Recovering from the saturation bombing of the Allies during World War II, Germany's ancient "Rome of the North" now is making a determined bid to regain its prewar position in Europe's economic life. Its quick comeback was no surprise to students of the city's history.

From the time of its founding on the Weser River in the eighth century, Bremen has been wracked by wars, insurrections, and revolutions. Its buildings have been plundered and burned countless times; generations of its citizens have been put to the sword. Yet the life force of the city has survived each disaster to bring it to a 20th-century position among the top shipping and commercial cities of northern Europe.

At the beginning of 1950, Bremen, with its 400,000 residents, was being served by 80 cargo lines reaching to market centers throughout the world. Although the port recently handled more tonnage in one day than on any previous day in its history, a rapid expansion of facilities continues. Warehouses and factories are being constructed and a grain elevator, reported Europe's largest, is nearing completion.

Bremen's position on an important navigable river, just 46 miles from the North Sea, is largely responsible for its well-nigh indestructible character. The city's first citizens—Saxons of the Chauken (Chauci) tribe—are said to have selected the site because it was accessible to the sea yet far enough inland to gain some protection from pirates.

Member of Hanseatic League

By the time Charlemagne sent the first missionary to Christianize the natives in 787, Bremen was already prospering as a market and trading town. In the centuries that followed, the community became a great religious center—a second Rome to the powerful princes of the Church who ruled vast estates from their Bremen palaces.

Before the 15th century Bremen had achieved a degree of self-government remarkable for the times. Its elected town council exercised the supreme legislative power in civil and criminal cases. Later, merchant groups gained control of the council. Individual enterprise still was allowed to flourish and the city, as a member of the Hanseatic League, became rich and influential.

UMI

brother. As usual, astrology—which ranks next to the prevailing Buddhist religion in shaping the national and private lives of Thailand—played its part in timing the celebrations.

Yet for all its symbolism, its gilded temples, and wild tropic jungles in which tigers and monkeys roam, Thailand has accepted considerable modernization from the West. Supporting this modernization, so noticeable in the cosmopolitan capital, Bangkok (illustration, inside cover), is one of the Orient's most stable economies. This factor is considered a bulwark against the growth of communism.

In the crowded, food-pinched Far East, Thailand rates as relatively prosperous, with such resources as tin, tungsten, rubber, and elephant-piled teakwood from the northern forests. Many Thailanders, easygoing and passive, own their small farms. Nature is generous with a fertile soil, and rivers and neighboring seas are stocked with fish to add variety to a simple native diet.

NOTE: Thailand appears on the National Geographic Society's map of Southeast Asia. Write the Society's headquarters, Washington 6, D. C., for a map price list.

For further information, see "Operation Eclipse: 1948," in the *National Geographic Magazine* for March, 1949; "Pageantry of the Siamese Stage" and "Scintillating Siam," February, 1947; "Ancient Temples and Modern Guns in Thailand" (10 photographs), November, 1941*; and "Land of the Free in Asia," May, 1934. *(Issues marked with an asterisk are included on a special list of Magazines available to teachers in packets of ten for $1.00; issues unmarked are 50¢ a copy.)*

See also, in the GEOGRAPHIC SCHOOL BULLETINS, April 24, 1950, "Siam Is Set for Returned King's Coronation"; "Siam May Trade Rice for Railroads," January 10, 1949; and "To Outsiders Thailand Is Once More Siam," November 5, 1945.

W. ROBERT MOORE

WATER LIFTED BY THE WHEEL DRAINS THROUGH BAMBOO PIPES TO IRRIGATE CROPS

At Chiang Mai, in the northern part of Thailand, the current of the Ping River turns the wheel and fills the slanted bamboo tubes placed at intervals. The tubes empty at the top into a trough.

Bulletin No. 3, November 27, 1950

New Park Enhances Bay of Fundy's Charm

THE Bay of Fundy, whose mountainous tides are a geographic marvel and a drawing card for tourists, has an added attraction in Canada's newest national park.

For the Fundy National Park, opened last July, the Canadian government set aside about 80 square miles on the New Brunswick coast of the bay. The area, between the Goose and Upper Salmon rivers, has been developed as a recreation center. There amid beautiful natural surroundings, holiday visitors may amuse themselves with a variety of sports. Park facilities include a golf course, bowling green, tennis courts, and a swimming pool heated to a comfortable temperature.

Famous for High Tide

The park is also a wildlife sanctuary. Among the animals which take refuge there are the moose, black bear, and fox, and such small fur-bearers as the raccoon, mink, muskrat, weasel, and the ever-building beaver. A great variety of birds summer there. Lakes and streams lure the fisherman with trout and salmon.

The Bay of Fundy has been a double-barreled subject of discussion from its earliest history. Interest centers on the reasons why the tide rises higher there than anywhere else in the world. The ownership of the bay is the other point for debate.

Because its tides rise highest, this 180-mile-long bay between two of Canada's provinces, New Brunswick and Nova Scotia, is perhaps better known by name than any other bay in the world. Juvenile geographers are greatly impressed by tales of Fundy's fantastic tides.

As a normal tide rolls in from the ocean, it is held back and lifted by the funnel-like shape of the bay, until at narrow points it rises more than 50 feet. Tides pour in and out of Fundy basins and river mouths with terrific force and volume.

Inrushing water not only is squeezed from the sides by a narrowing channel, it also is pushed steadily upward by the remarkably uniform rise of the bay's floor. This ascent averages about four feet per mile.

Low Tide Leaves Ships High and Dry

Scientists figure that this wedging is not the only cause of Fundy's 50-foot tides. Observing that the bay's waters tend to swish back and forth like water in a bathtub, they note a 12½-hour oscillation period. As this coincides with the period of the ocean tides, a new flood tide is thus right on hand to nudge Fundy's oscillating waters at the right time, in the manner of a boy giving a timely push to his tub water.

The Fundy tides bring big ocean-going freighters into docks at Saint John, Windsor, Walton, Wolfville, and other ports. They leave them a few hours later cradled on dry planks of a harbor floor, or perhaps squatting helplessly in the reddish-brown mud of a tidal basin (illustration, next page). Fishing boats, beached at high tide, may be a half mile inland when the tide is out. Dikes, like those of the Netherlands, protect vast acres of fertile farm land.

UMI

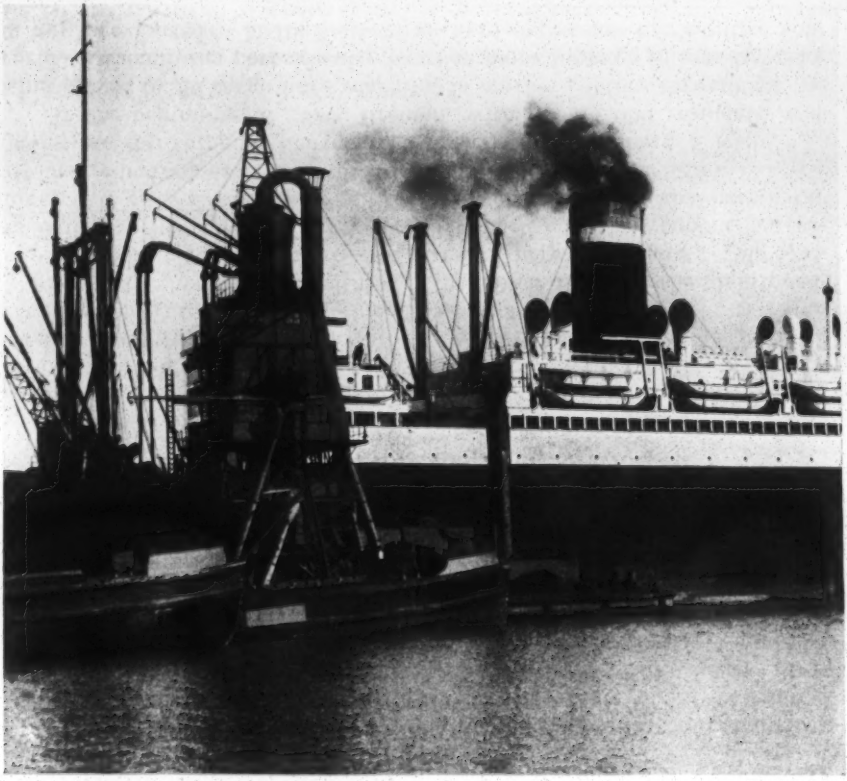
Before World War II Bremen was considered one of the most beautiful of German cities. Its famous old city hall, rich with artistic treasures, fronted a market place lined with guild houses, churches, and medieval homes of the Hansa merchants. Not far from the old section the visitor could see the great Deschimag shipbuilding yard—birthplace of the luxury liner *Bremen*, and biggest producer of the German U-boat.

After the last bombs fell in the spring of 1945 Bremen appeared to be reduced to a shambles. The cleanup and repair job was so large that authorities at first estimated it would take from 20 to 30 years to rebuild the city to its prewar level.

NOTE: Bremen, and the American zone with its two North Sea enclaves, may be located on the Society's map of Western Europe, published as a supplement to the December, 1950, issue of the *National Geographic Magazine*.

For additional information, see "Airlift to Berlin," in the *National Geographic Magazine* for May, 1949; "With Uncle Sam and John Bull in Germany," January, 1949; "Uncle Sam Bends a Twig in Germany," October, 1948; "What I Saw Across the Rhine," January, 1947; "War's Wake in the Rhineland," July, 1945*; and "Renascent Germany," December, 1928.

See also, in the Geographic School Bulletins, March 13, 1950, "Oberammergau Prepares 1950 Passion Play"; and "Rumors Hint Bavaria and Austria May Merge," January 16, 1950.



EWING GALLOWAY

GREAT LINERS DOCK AT BREMERHAVEN, AN AMERICAN-ZONE NORTH SEA PORT

Bremen, 46 miles up the Weser River from Bremerhaven, is also reached by big ships. Both ports are in enclaves of American-occupied territory far removed from the rest of the United States zone.

Bulletin No. 4, November 27, 1950

Alexander Graham Bell Enters Hall of Fame

ALEXANDER Graham Bell, recently honored by election to the Hall of Fame of Great Americans at New York University, is best known for the invention of the telephone. But he was a versatile thinker and a leader in the social and cultural life of his time.

One of the original members of the National Geographic Society when it was founded in 1888, Dr. Bell helped finance it in its early stages. He initiated the extension of its membership and the popularization of its Magazine while serving as the Society's president from 1898 to 1903. He was a life trustee of the Society and a member of the Board of Regents of the Smithsonian Institution for many years.

Born in Scotland

Until his death at 75 on August 2, 1922, Dr. Bell's active mind delved deeply into a variety of subjects including sound recording, aviation, sheep breeding, human longevity, distillation of fresh water from salt water, air conditioning, high-speed motorboats, weights and measures, and many others.

Born in Scotland in 1847, he was originally a teacher of the deaf, and it was his quest for a better speech-teaching method that led him to invent the telephone.

In 1878, only two years after his first successful telephone conversation, Bell wrote: "It is conceivable that cables of telephone wires could be laid underground or suspended overhead, communicating by branch wires with private dwellings, country houses, shops, manufactories, etc., uniting them through the main cable with a central office where the wire could be connected as desired, giving direct communication between any two places in the city . . . in the future wires will unite telephone offices in different cities, and a man in one part of the country may communicate by word of mouth with another in a different place."

This prophecy was to come true in a mere 14 years, when the inventor personally opened long-distance service between New York and Chicago (illustration, cover).

Predicted Air Control

A pioneer experimenter in aeronautics, Bell, as early as 1903, while President of the National Geographic Society, wrote on the "Tetrahedral Principle in Kite Structure" (illustration, next page) for the *National Geographic Magazine*. As far back as 1908, he observed: "The airship will revolutionize warfare . . . it may become a war-exterminating agency and thus end all armed conflicts. *The nation that secures control of the air will ultimately control the world.*"

A few years later, during the Taft administration, newspapers described an elaborate ice plant, newly installed in the White House, which kept Mr. Taft at a comfortable 80 degrees when the rest of Washington sizzled in a 100-degree heat.

Bell, in his Connecticut Avenue home a few blocks away, however,

UMI

The argument as to who has the right to roam Fundy's waters is kept alive by the Canadian Navy. A century-old view persists that, since the bay is flanked by two Canadian shores, it is rightly a Canadian inland sea. Officially, however, it is agreed that only the water within three miles of the shores is Canadian, since the mouth of the bay is 50 miles wide. Waters outside that limit are considered open sea, available to all nations.

NOTE: The Bay of Fundy may be located on the Society's map of Canada, Alaska, and Greenland.

For further information about eastern Canada, see "Sea to Lakes on the St. Lawrence," in the *National Geographic Magazine*, September, 1950; "Quebec's Forests, Farms, and Frontiers," October, 1949; "Newfoundland, Canada's New Province," June, 1949; "Exploring Ottawa," November, 1947*; "Newfoundland, North Atlantic Rampart," July, 1941; "New Brunswick Down by the Sea," May, 1941; "Salty Nova Scotia," May, 1940; "Gentle Folk Settle Stern Saguenay," May, 1939; and "Old France in New Canada," February, 1935.

S. J. HAYWARD

ICE-FREE THE YEAR AROUND, SAINT JOHN HARBOR IS ALSO, PERIODICALLY, WATER-FREE

Fishing boats, left stranded in this slip by Fundy's colossal tides, are part of one of New Brunswick's chief industries. With lumber and farm produce, fish stand high on lists of exports from the province's chief port and metropolis. The city of 51,741 (1941) is Atlantic terminus of the transcontinental Canadian Pacific Railway.

Bulletin No. 5, November 27, 1950

Katmai Monument Is Alaskan Volcanic Wonder

THE Katmai National Monument, where tours and visitors' accommodations were made available last summer for the first time since this Alaska park area was taken over 32 years ago, is Uncle Sam's number-one volcanic show in action.

Long inaccessible except to well-equipped expeditions, the wild Katmai region at the head of the straggling Alaska Peninsula is a wonderland of fire and ice, of smoldering and dying volcanoes. The miracle of reappearing green life after nature's cataclysms adds to the show.

Katmai Eruption Among Most Violent

Chief sights of the monument are the decapitated giant, Mount Katmai, which blew its top in 1912, and the fabulous Valley of Ten Thousand Smokes (illustration, next page), discovered in 1916 by one of the National Geographic Society's expeditions to this region.

The Mount Katmai eruption of June, 1912, was among the dozen most violent ever recorded. It was heard in Juneau, 750 miles away; while the town of Kodiak, 100 miles distant on Kodiak Island, was covered with a foot of ashes.

Because of the lonely character of the surrounding country, there was no loss of human life from the Katmai explosion, and relatively little property damage of the sort produced by similar terrific outbursts. But the bodies of countless birds were scattered over neighboring waters; big brown bears and herds of caribou were buried under the deep ash fall; and all vegetation for miles about was killed.

Mount Katmai itself, after the "big show," was left with a yawning crater three miles across and some eight miles around. Within its depths stretched a mile-long milky blue lake, holding a 40-acre island.

Near by had been born what was to appear on future maps as the Valley of Ten Thousand Smokes—a huge "chemical laboratory" with strange sights and smells, hot streams issuing from under snowbanks, and millions of steam jets releasing gases and vapors from vents in the valley floor.

Steam Jets Lessening

"It was as though all the steam engines in the world, assembled together, had popped their safety valves at once," wrote the leader of the National Geographic Society expedition in describing his first glimpse of the area in the summer of 1916. "Some (jets) were sending up columns of steam a thousand feet."

Today the valley's activity is considerably diminished, and here and there bits of green are beginning to show. In time, geologists say, when the ground has cooled enough to retain subsurface water, steam pressure still farther down will force out this water to form a geyser field.

Meanwhile, the Katmai National Monument remains one of the world's wonders. Established by presidential proclamation in 1918, it now covers nearly 2,700,000 acres. This makes it the largest area administered by the National Park Service.

UMI

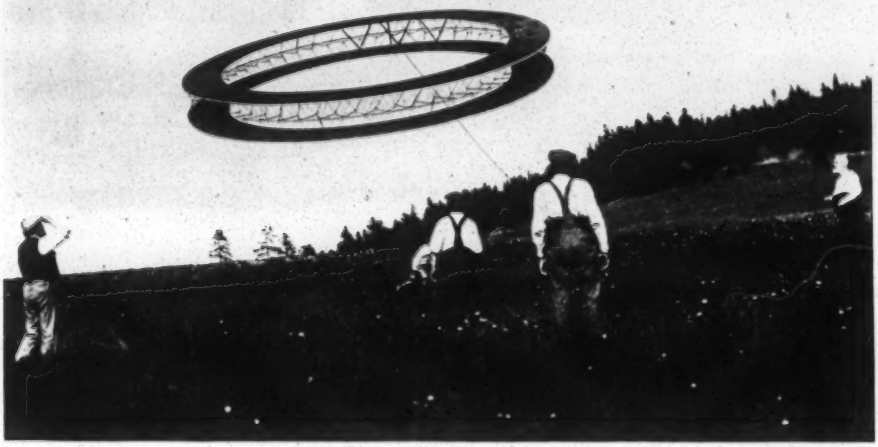
installed a refrigerator in his attic, and in it placed large blocks of ice covered with salt. An asbestos-covered duct led the cold air down to one of his rooms, which was kept as nearly sealed as possible at the bottom to retain the sinking cold air, while its windows were opened at the top to let warm air out. With 100-degree outside heat, Bell's air-conditioned chamber was a cool 65 degrees, with, as he noted, "a delicious feeling of freshness in the air."

The Hall of Fame is located on the University Heights campus of New York University in New York City. Every five years it selects new illustrious Americans to fill its niches. Nominees for the honor must have been dead 25 years. Thus Dr. Bell, having died in 1922, became eligible for the first time in the 1950 elections.

Entering the Hall of Fame at the same time as Dr. Bell were Dr. William Gorgas, conqueror of yellow fever in Cuba and the Canal Zone; President Woodrow Wilson; Susan B. Anthony, leader of the women's suffrage movement; President Theodore Roosevelt; and Josiah Willard Gibbs, pioneer mathematical physicist.

NOTE: Washington, D. C., long the home of Alexander Graham Bell, and home of the National Geographic Society, is shown in great detail on the Society's Pocket Map of Central Washington. On the reverse side appear the suburban districts of Maryland and Virginia.

See also, in the *National Geographic Magazine* for March, 1947, "Miracle Men of the Telephone" and "Birthplace of Telephone Magic" (20 color photographs); "The Miracle of Talking by Telephone," October, 1937*; and "Prehistoric Telephone Days," (by Alexander Graham Bell), March, 1922.



GILBERT GROSVENOR

DR. BELL (extreme right) EXPERIMENTS WITH A 1908 VERSION OF A "FLYING SAUCER"

This wheel-shaped, multicelled contrivance was one of a series of kites made and flown by Alexander Graham Bell in the early days of flight. The inventor's tetrahedral (four-sided) kite actually lifted a man 168 feet in the air. That man was young Lieutenant Thomas E. Selfridge, who became one of America's pioneer aviators. Selfridge Field, near Detroit, Michigan, is named for him. Dr. Bell's kite experiments were conducted from his Baddeck, Nova Scotia, laboratories.

Besides its volcanic manifestations, Katmai is also noteworthy for handsome lake, forest, and mountain scenery; and for its abundant wildlife, including the Alaska brown bear, largest of carnivorous animals.

NOTE: Katmai National Monument may be located on the Society's map of Canada, Alaska & Greenland.

For additional information, see "Exploring Aleutian Volcanoes," in the *National Geographic Magazine* for October, 1948; "Mapping the Home of the Great Brown Bear," January, 1929; "Our Greatest National Monument," September, 1921; and for numerous earlier articles on the region, refer to the *Cumulative Index to the National Geographic Magazine.*

E. C. KOLB

THE VALLEY OF TEN THOUSAND SMOKES IS KATMAI'S FEATURE ATTRACTION

There are not so many jets of steam today in the Alaskan national monument. In fact, the ground of the valley has cooled enough to allow the first greenness of plant life to show since the Mount Katmai explosion of 1912. Geologists predict that in time a geyser field similar to that of Yellowstone will be active here.

The following order form may be used (or copied) for requesting the BULLETINS: School Service Department, National Geographic Society, Washington 6, D. C.

Kindly enter ..... Subscriptions to the Geographic School Bulletins, published weekly (30 issues) during the school year. Subscriptions entered at any date extend to that date the succeeding year.

Address for sending BULLETINS .....

City ..... State .....

I enclose, for each subscription, 25 cents (in United States or its possessions; in Canada, 50 cents in U. S. Funds): Total amount .....